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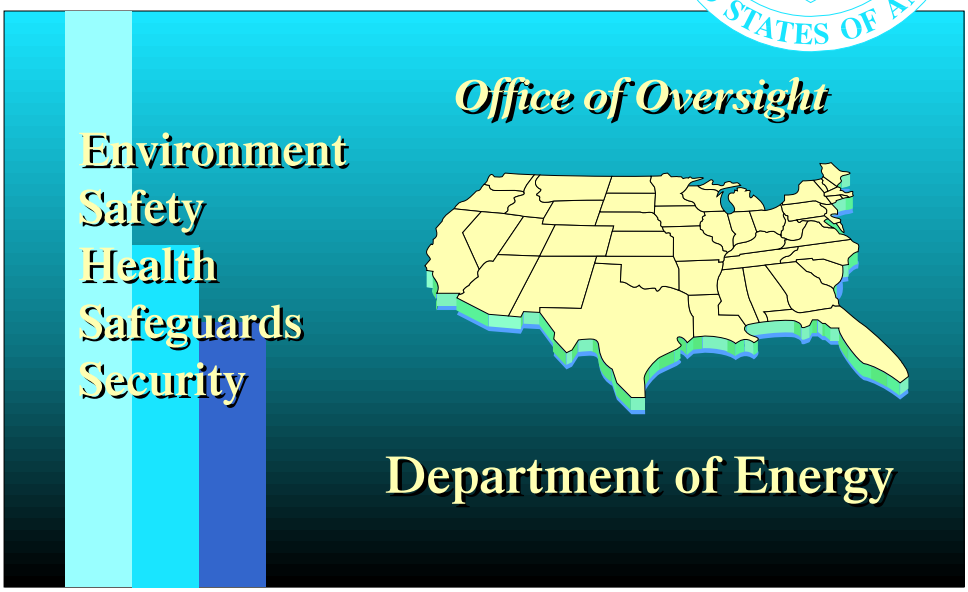
OVERSIGHT

Pantex Plant

Safeguards and Security Profile Summary Analysis

August 1997



Office of Environment, Safety and Health

1.0 Introduction

The Department of Energy (DOE), Office of Environment, Safety and Health, conducted a review of the current safeguards and security posture at the Pantex Plant and at the local DOE area office in Amarillo, Texas, in August 1997. This review was part of a recent initiative to characterize the current status of safeguards and security programs throughout the Department. This document describes significant aspects of the safeguards and security posture at the Pantex Plant observed during the review.

2.0 Background

Location

The Pantex Plant facilities occupy approximately 2,000 acres of a 9,000 acre site located in a sparsely populated farming area 17 miles northeast of Amarillo, Texas.

Mission

The Pantex Plant's current missions include: assembling and disassembling nuclear weapons; evaluating, repairing, and retrofitting nuclear weapons; demilitarizing and sanitizing components of dismantled nuclear weapons; storing some of the dismantled weapons' special nuclear material components (called pits and secondaries); and developing, fabricating, and testing chemical explosives for nuclear weapons.

Security Interests

DOE security interests at Pantex include approximately: 800 nuclear weapons; 10,000 pits and 6,000 secondaries; 450,000 classified documents; 180,000 classified parts; 500 classified computer systems; and 7 classified computer networks.

Protection Strategy

To meet protection needs, the Pantex Plant employs a multiple-layered protection strategy to protect the site's security interests. These layers include: (1) physical barriers (fences, barbed wire, razor ribbon) and electronic intrusion detection systems at the outermost boundaries of site security areas; (2) the buildings in which the assets are located and the intrusion detection systems, alarms, access controls, and search procedures associated with those buildings; and (3) the vaults, vault-type rooms, safes, and associated intrusion detection systems and administrative controls within the buildings in which the security interests are stored.

A number of administrative and electronic or mechanical protection measures are employed at various points throughout these layers of protection. Administrative measures include the security clearances granted to personnel having access to various security interests, a human reliability

program that employs random drug and alcohol tests and psychological testing for personnel with direct access to special nuclear material, a staff badging system to distinguish staff with security clearances from those without, numerous entry/exit points staffed by protective force personnel, and protocols such as "two person" rules which assure that at least two persons are present when nuclear material is being handled in order to minimize the possibility that a single insider could commit a malevolent act undetected. Electronic and mechanical protection measures include access controls such as cipher locks, hand geometry identification systems, retinal scanning devices, magnetic key cards and personal identification numbers, closed circuit television, and an array of safe combination locks and lock and key controls.

Finally, the Pantex Plant has a protective force consisting of armed personnel who assess and respond to security matters anywhere within the multiple layers of the protection scheme described.

3.0 Results of Past Safeguards and Security Reviews

The most recent self-assessments of the Pantex Plant safeguards and security program by site contractors and the surveys by the local DOE operations office have been generally positive. Areas reviewed included program management, protection program operations, information security, nuclear material control and accountability, and personnel security. The results of this site profile review correlate closely with the results of the most recent inspection by the Office of Security Evaluations, in which management programs, personnel security, protection of special nuclear materials, and protection of information were all found to have acceptable overall performance.

4.0 Results of This Review

Positive Trends and Initiatives

The various indicators considered while developing this profile all support the conclusion that classified matter is being protected at Pantex. Likewise, the special nuclear materials stored at the Pantex Plant are, for the most part, adequately protected against theft. Any recognized risks associated with certain theft scenarios are being reduced through ongoing upgrades.

Overall, Pantex has a solid safeguards and security program consisting of well integrated elements guided by competent and flexible staffs. Management support for security-related needs is reflected in the resources dedicated to ongoing physical security upgrades and maintenance of protective force staffing, equipment, and facilities.

The cognizant DOE operations office and the local area office, in concert with the plant contractor, are pursuing a number of protection program initiatives. Among them are the improvements in the plant's perimeter intrusion detection system; upgrades in nuclear weapon component staging and storage areas; enhancements in fencing, perimeter lighting, and guard towers; and improvements in protective force tactical performance and equipment.

Along with physical systems and protective force upgrades, the Pantex Plant has also implemented enhancements in inventory frequency and measurement protocols for special nuclear materials and, in the area of computer security, has consolidated

classified and unclassified computer security programs for better program support to users and more effective management.

Finally, the DOE area office has increased emphasis on safeguards and security team surveillances and participation in security self-assessments with the intent of improving the area office's overall level of security awareness in day-to-day plant operations, and fostering a cooperative working relationship among the plant, the area office, and the DOE operations office.

Issues Warranting Management Attention

The most pressing issue is the need to maintain adequate security during construction related to system upgrades. The profile effort revealed some shortcomings in this area. Each was corrected as it was discovered, but continuing construction in the vicinity of vital security systems is cause for continued vigilance. Additionally, the construction schedule for completing security upgrades, as well as the period of risk acceptance, has been extended well beyond its original milestone. The possibility of further construction delays, or of the adverse impact of deferred maintenance on the aging systems being phased out, represent significant management concerns at Pantex. Further, while Pantex has conducted a thorough analysis of radiological sabotage scenarios, Headquarters has directed that their site safeguards and security plan should not present the full spectrum of these results. It was also noted that some longstanding protection issues are still awaiting identification of technology sufficient to meet site needs.